



JOURNAL

FEBRUARY 1959



9XM-WHA

"The Oldest Station in the Nation"

On this campus pioneer research and experimentation in "wireless" led to successful transmissions of voice and music in 1917, and the beginning of broadcasting on a scheduled basis in 1919.

Experimental station 9XM transmitted telegraphic signals from Science Hall until 1917 when it was moved to Sterling Hall. In that year Professor Earle M. Terry and students built and operated a "wireless telephone" transmitter.

In 1918, during World War I, when other stations were ordered silenced, 9XM operated under special authorization to continue its telephonic exchange with U.S. Navy stations on the Great Lakes. After the war, programs were directed to the general public.

The WHA letters replaced the 9XM call on January 13, 1922. Thus, the University of Wisconsin station, under the calls 9XM and WHA, has been in existence longer than any other.

Marker Erected 1958



ABOVE: Harold A. Engel (right), Assisting Director of WIIA, presents a framed tube to C. M. Jansky, Jr. This is a triode vacuum tube which Jansky made as a student at the University of Wisconsin in 1918, during the first days of 9XM. See "The Oldest Station in the Nation," page 3.

ON THE COVER: Historical marker dedicated November 24, 1958, on the University of Wisconsin campus in Madison. Approved by Wisconsin State Historical Society and the University Board of Regents. See "The Oldest Station in the Nation," page 3.



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The Oldest Station in the Nation

Wisconsin celebrates forty years
of regularly scheduled broadcasting

Someone observed that the path of educational broadcasting is marked by the gravestones of stations which perished by the wayside.

Recently a different kind of marker was erected. It marks the existence of a station which weathered the storms and continues to serve. On the University of Wisconsin campus in Madison stands an official State Historical Society plaque commemorating the establishment there of 9XM-WHA, "the oldest station in the nation."

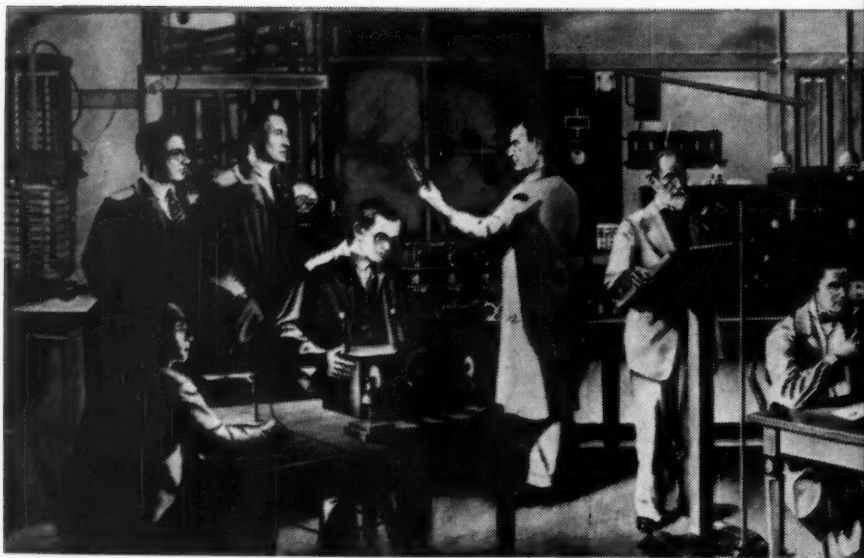
9XM was the call which identified the experimental station operated by the physics department of the University of Wisconsin. It began as a "wireless telegraph" station, and then went into wireless telephony. The work with tube building, for transmitting modulated signals, began in 1916, and by

1917 "successful" transmissions of voice and music were accomplished. By 1919 a regular schedule of broadcasting had been established. In January, 1922, the new WHA call was assigned.

By **Harold A. Engel**

*Assistant Director, Wisconsin
State Broadcasting Service.*

The story of WHA includes chapters typical of many stations. There were successes, and failures, and times of crisis. However, through a combination of circumstances, and the courageous determination of a few men of character and vision, WHA was able to avoid pitfalls which caused the demise of many contemporary stations.



MURAL IN RADIO HALL

1. James B. Davis
2. Roswell Herrick
3. Burton Miller
4. C. M. Jansky, Jr.

5. J. P. Foerst
6. William H. Lighty
7. Malcolm Hanson

During World War I, at a time when most transmitters were forced to dismantle their equipment, 9XM through an act of fate was ordered to remain in operation. It had been engaged in two-way wireless communication with the Great Lakes Naval Training Station at Waukegan, Illinois, which the Navy desired to have continued. 9XM continued, and in that period its operators achieved considerable

success as tube-makers. By the time the government ban on broadcasting was lifted in 1919, the University of Wisconsin station's telephonic broadcasting was well established.

So it was that the University of Wisconsin station, despite the necessity for the occasional halting of on-the-air activities for equipment rebuilding, vacation periods, and limited funds, was able to



Artist: John Stella

WHA, Wisconsin State Broadcasting Service, University of Wisconsin, Madison.

- 8. Andrew W. Hopkins
- 9. Edward Bennett
- 10. E. M. Terry
- 11. Henry L. Ewbank

- 12. Waldemar Geltch
- 13. Edgar B. Gordon
- 14. Paul Sanders

retain its broadcasting station. Today it remains the country's oldest station, in terms of continuous licensing, maintenance, and operation.

In radio's era of runaway growth in the 'twenties, educational stations were largely forgotten in the rush to provide entertainment for the masses. They were ignored by commercial operators—except as they might wish to ac-

quire their facilities. These operators were too busy to think much about history—though several referred to their “pioneer” status. Among them are WWJ Detroit, which is credited with starting in July, 1920, and KDKA Pittsburgh, which dates back to November 2, 1920. Even among the early commercial stations the mortality rate was high as the jockeying for fav-

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Educational Broadcasting and Public Relations

PR expert says

it pays to make friends

I

How well do educational broadcasting stations handle their public relations?

Or to put it another way, how conscious are our educational broadcasting stations of proper day-by-day public relations?

Perhaps at this point a workable definition of public relations would be in order. How about this one: *Good public relations is the practice of instilling and maintaining the most favorable attitudes possible among the greatest number of people possible on a continuing and permanent basis.*

So, if this definition is accepted, public relations goes far beyond the routine chores of program schedules, newspaper releases, and guided tours. In a little research project I conducted last year for the NAEB Public Relations Committee, a significant conclusion reach-

ed was to the effect that "The participation in public relations activities by educational broadcasting stations is spotty . . ."¹

By Elmer G. Sulzer

*Director, Radio and Television
Communications, Indiana Uni-
versity.*

I hasten to add (this is good public relations, too) that excess blame should not be heaped too hastily upon the care-worn shoulders of educational station directors. Many of them are too heavily burdened by the day-to-day chores of handling conventional crises, meeting with committees, and filling out questionnaires of the nation's graduate students in broad-

1. Promoting Educational Broadcasting, Urbana, NAEB, c. 1958.

casting to think much about station public relations.

But right at this point, I have reached my thesis for today, which is that educational station public relations is *more* an attitude of mind than it is the pinpointing of specific PR activities. And our educational directors must *think* public relations twenty-four hours a day.

II

It is not enough for the director or station manager, only, to think in terms of public relations. The boss must indoctrinate every person on his staff with the same idea, and this goes for engineers, student assistants, and secretaries.

Secretaries! What class of station employee is more important than the secretaries, because usually they are the strangers' first contact with the station.

Our secretaries at the Indiana University Radio and Television Service are attractive (not chemically glamorous) individuals who just do the right thing naturally when a visitor comes in, whether he is a student's parent, another member of the I. U. staff, or a representative from the industry.

First, they greet the visitor warmly and cordially and make him feel at home. Then, they promptly make every effort to locate the person the stranger has come to see. They even show some anxiety

about the matter. If the desired person is not readily available, a substitute staff member is quickly suggested.

If no acceptable person can be found at once, how does the visitor fare? Is he left to his thoughts, the examination of pictures on the wall, or must he just gaze out the window?

Not at all. The secretaries provide him with reading matter. It might be an issue of *Variety* or *Broadcasting* (the latest number) or a copy of *The Pitchman*. If the visitor desires to comment to a secretary, the secretary cheerfully communicates back.

If five minutes elapses and still the wandering staff member has not shown, a secretary asks our visitor if he would like a cup of coffee (a coffee machine helps in this case) or a coke. Our waiting customer usually replies in the affirmative, and the simple beverage is promptly forthcoming. So this service may cost the station director a few nickels a month. But isn't it worth it?

III

Truly, public relations is a mental attitude that must permeate the stations' every action. Let me tell a story that does not reflect on us too favorably.

Last summer the university sent our acting program supervisor and

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The Role of Music in European Broadcasting

Canadian observer finds
overseas programs superior

Serious music in all its phases and aspects forms by far the greatest part of European broadcasting. With this brief statement, I would sum up the findings of an extensive survey which I conducted during my recent recital tour of European radio and television centers. Impressions gained from intimate consultations with officials of these centers, as well as an exchange of views and reports occasioned by the UNESCO music council sessions held in Paris, in which I had the honor to participate, show two basic premises which should be mentioned from both a factual and a critical point of view: 1. The sources of financial maintenance of all broadcasting in Europe are either public or governmental. 2. Radio is considered an eminently better medium than television for music broadcasts, even though some outstanding programs are being presented on television.

While these factors are no revelations to us, it should be kept in mind that they do shape the entire texture of programming in a definite manner. The first enables station management and program direction to plan, far ahead, for series of great events, assuring the

By Karl Haas

*Pianist and Lecturer-Recitalist,
Canadian Broadcasting
Corporation.*

musical coherence and continuity of subject matter vital for good listening, without fear of suspension by poll-struck sponsors. As for the second factor, visual distraction from aural and mental concentration is considered the chief reason why TV plays a comparatively minor role in music broadcasting. As a result, elaborate planning is lavished on radio pro-

grams, even in the face of a steadily increasing growth of TV. As the Director of the Hessische Rundfunk in Frankfurt puts it: "Not only will radio live on because it presents different programs in a manner different from that of TV, but radio would have had to be invented and developed even if TV had been born first."

For factual report, I have singled out four of the most important music centers among the European stations included in my recital and survey itinerary: Hessischer Rundfunk Frankfurt, Société Suisse de Radiodiffusion Geneva, Radiodiffusion Française Paris; and Radio Nederland Hilversum.

The musical program of the Hessische Rundfunk Frankfurt is an extremely elaborate one. Located in a magnificent new building, which was originally intended to house the West German Parliament, the station has at its disposal one of the finest auditoriums in Europe today. In it will take place, during the course of the current season, sixteen symphony concerts, eight special youth concerts, and six chamber music concerts, all public concerts played by the station's own symphony orchestra, with renowned soloists and conductors. This is one of three orchestral organizations which Hessischer Rundfunk employs solely for its own purposes, in addition to a large chorus. These public concerts, which are usually oversubscribed, are repeated on radio

for those who could not attend. Other radio offerings include such fare as weekly programs entitled "Paths to New Music," in which the evolution of twentieth century music is demonstrated by way of relationship with past periods of writing, and a series called "Studio for New Music," consisting of discussions and commentary on new works performed at European festivals of modern music. A separate department of educational programs brings children's live performances of masterworks, programs on form and interpretation of music, broadcasts of actual music-making in the home, exciting demonstrations of how to set words to music (in opera and lied), music at seventeenth and eighteenth century courts, musical portraits, carillon programs, and liturgical music of Ambrosius, while separate adult education fare offers programs on music of many peoples, demonstration of how a record is made, mathematics and music, and many others.

A Sunday request program, directed by a well-known critic, has enjoyed many years of popularity. Requests for serious works come in by the thousands, and programs are distinguished by the coherence of their stylistic construction. Senders of requests are notified in advance of the date of broadcast of their favorites.

Hessischer Rundfunk operates on two wave lengths, one being

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Answer to a Director's Dilemma

Nebraska station solves TV classroom problem

A basic production problem has been solved at KUON-TV, the University of Nebraska's educational television station. For several years the station has presented a weekly program called "Let's Visit School." A classroom of the Lincoln Public Schools is brought to the studio, where the cameras act as visitors—watching the teacher and students in a spontaneous classroom situation.

The big production problem has always been to catch a student in close-up with the microphone over his head at the split second when the teacher calls on him to recite. In a class of fifteen or twenty students who answer quickly and briefly, the television director usually gets only the last two or three words of a response on the air.

Ron Hull, KUON-TV's production director, has found a so-

lution to this director's dilemma. In prior planning with the teach-

By **Robert Schlater**

Program Manager, KUON-TV, University of Nebraska.

er, this system is worked out: *the teacher doesn't actually call on the student to recite; the mike boom operator does.*

Here is how it works. When that point in the program is reached where the question-answer technique is used, the boom operator chooses a student at random and positions the mike directly over him. The close-up camera immedi-

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Projects and Products

a monthly column

by

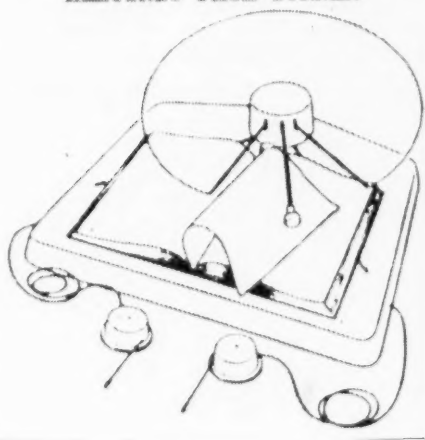
Philip Lewis

CC-TV USED IN A DECENTRALIZED LIBRARY SITUATION

One of the most unique and imaginative uses of closed-circuit television is reported by Roger Pattrell Bristol, Deputy Project Director, Alderman Library, University of Virginia at Charlottesville. The purpose of the installation is to determine the applicability of television equipment to research library use in the transmission of visual images of book pages.

Several buildings on the campus are at a considerable distance from the library. A number of the more remote structures, however, are now connected with the Reference Center by coaxial cable and associated control and communication wires. The system provides viewing monitors at each reception station, along with telephone intercom and remote controls.

ELECTRIC PAGE TURNER



In use, a request for a particular reference is telephoned to the library from a remote viewing station. The book is located and placed on an electrically operated page turner in front of a television

camera. Controls are operated to activate the system, and to make minor adjustments for effective transmission of the particular material. From here on the viewer manipulates his remote controls to cause the TV camera to pan and tilt, or to cycle the page turner to the left or to the right. The telephone is used to inform the library when the service is to be concluded, or to ask for additional material.

This experimental design is one of several that have been implemented to effect data transfer between a central depository and multiple remote locations. Other applications will be described from time to time in subsequent presentations.

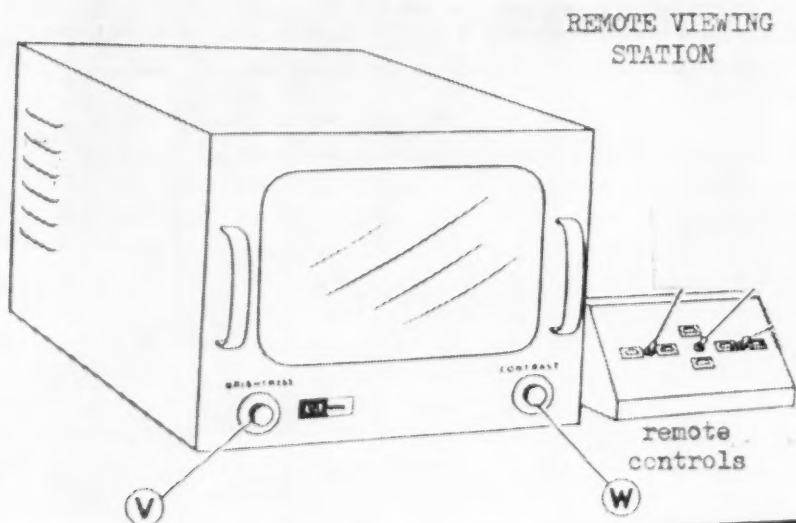
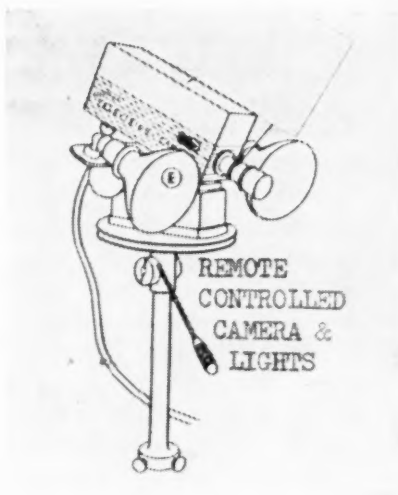




Photo courtesy of Minneapolis-Honeywell Regulator Company

TELEVISED INSTRUCTION FOR THE HOSPITALIZED AND THE HOMEBOUND

Bedside teaching has held an important challenge for educational administrators ever since this service became a responsibility of the schools. Currently, the two major approaches toward a satisfactory solution of this complex and costly problem involve:

- a. the traveling teacher, who makes regular visits to the home or hospital unit to provide individual tutoring.

- b. visitations by the special teacher to supplement the instructional facility of telephone intercommunication between the classroom and the home-installations, providing one-way or two-way audio exchange.

A newly introduced Minneapolis-Honeywell Bedside Control Center for institutional use includes a closed-circuit television set that is linked to the hospital

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Book Review

Voluntary Listener-Sponsorship by Lewis Hill. A Report to Educational Broadcasters on the Experiment at KPFA, Berkeley, California. Pacifica Foundation, Berkeley, California, 1958. 95 pages.

The author, Lewis Hill, is the late president of the Pacifica Foundation. The experiment described, and the publication of this report, were made possible by grants from the Fund for Adult Education.

Although Lewis Hill does not say so, the idea involved in this experiment was largely his "brain-child." As Harold Winkler states in the Preface: "I became President of Pacifica Foundation in November, 1957, just in time to preside over the harvesting of the plantings of previous years."

The question which this experiment sought to test—"the 2% theory of audience support for educational broadcasting,"—is essentially this: Can such a station count on income, on a subscription basis (\$10.00 per year), from a significant enough minority of a population (2%) to "produce annual revenues to cover operating costs"?

On the basis of the Pacifica experiment, the answer can now be given in the affirmative. The implications of this "discovery" for educational and cultural broadcasting in the U. S. are tremendous.

The book treats with admirable dispassion the crises through which the station and staff passed in the period from 1952 to the present. There were frequently no funds to pay the staff, even the extremely minimal salaries planned. Whole staffs were turned out, only to come back later to continue this single-minded experiment to test whether minorities would pay for mature materials designed for them.

KPFA was started at a time when prospects for FM were good. However, most of the years of the experiment were years of FM decimation: people were unable even to get replacement parts for sets. The tribute which this book con-

TABLE A
PROJECTED REVENUES OF ELEVEN AM LISTENER-
SPONSORED STATIONS
Approx. 1950 Census

| Metropolitan Area | AM Sets (Dwelling Units) | From 2% Response Annual Revenue |
|-------------------|--------------------------|------------------------------------|
| San Francisco | 982,000 | \$196,000 |
| Los Angeles | 1,627,000 | 325,000 |
| Washington, D. C. | 812,000 | 162,000 |
| Philadelphia | 1,368,000 | 274,000 |
| New York City | 2,960,000 | 592,000 |
| Boston | 1,194,000 | 239,000 |
| Chicago | 1,758,000 | 352,000 |
| Detroit | 1,093,000 | 219,000 |
| Cincinnati | 641,000 | 128,000 |
| Pittsburgh | 882,000 | 176,000 |
| Buffalo | 741,000 | 148,000 |

stitutes to the FAE, as well as to Mr. Hill and the talented staff who stayed by him, is unique. Educational broadcasters who believe their lot is difficult may well draw inspiration from this report of faith in the integrity and intelligence of at least enough of the people to elicit their support.

In an industrialized age when standardization, and the concept of radio and TV as "mass" media, penalize the minority with tastes for something finer, how willing is this minority to pay specifically for a service that not only satisfies but also challenges it? Here again, the answer is a tribute to the discrimination of intelligent Americans,

once given a choice.

Mr. Hill gives the accompanying table (Table A) to illustrate the potential of the 2% principle for AM radio.

The suggestibility of this approach for TV, as well, is obvious: "The experience and principles outlined here seem to suggest a major opportunity for the further development and support of educational TV stations on VHF channels . . . We may feel reasonably certain that listener-sponsorship, properly organized with regard to programming and promotion, can

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ETV: Teaching or Showmanship

Two kinds of programs require different approaches

ETV produces two essentially different kinds of program fare: (1) the instructional program and (2) the general interest program. These categories are not mutually exclusive; one program may have elements of each kind embodied in it. But the philosophy behind the programming in each case is different.

The Instructional Program

Into this category fall all the in-school programs, all the telecourses and direct teaching experiments in ETV. The purpose of such programs is teaching, pure and simple, and all the principles of good teaching apply. One of these principles, the importance of first motivating the student to want the knowledge which the teacher is about to impart, is particularly important in ETV. Many teachers have neglected this motivation, knowing that the classroom audience was a captive audience, and relying on the goal of credit and a good grade to motivate the student to stay awake. Since these are in-

deed factors, albeit very poor ones, in motivation, education has been able to limp along on this basis with only an occasional individual with the leadership, the enthusiasm, the stimulation to really motivate and follow through on that

By Rudy Bretz

*Head, Television and Radio
Center, UCLA.*

motivation, and be remembered fondly throughout each student's subsequent life.

Where credit and grades are factors in instructional television, here indeed exists a captive audience, and the presentation can be unmotivated and dull without great risk of losing the audience. You can get away with less—you don't have to be as good, in other words, when you have a captive audience.

But if the course is broadcast,

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NAEB

Research
Fact
Sheets

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(through December 31, 1958)

- | | |
|--|---|
| <p>1. <i>Country in which research was done</i></p> <p>U. S. A.</p> <p style="padding-left: 20px;">Series I — 1-10, 12-18, 20-31, 33-52</p> <p style="padding-left: 20px;">Series II — 1-18</p> <p style="padding-left: 20px;">Series III — 1-12</p> <p style="padding-left: 20px;">Series IV — 1-8, 10, 12-18, 22, 23</p> <p style="padding-left: 20px;">Series V — 1-5</p> <p style="padding-left: 20px;">Series VI — 1-5, 9</p> <p style="padding-left: 20px;">Series VII — 1-5, 8, 9</p> <p>Canada</p> <p style="padding-left: 20px;">Series I — 11, 32</p> <p style="padding-left: 20px;">Series IV — 9a, 19, 21</p> <p>Britain</p> <p style="padding-left: 20px;">Series I — 19</p> <p style="padding-left: 20px;">Series IV — 11, 20</p> <p style="padding-left: 20px;">Series VI — 6-8</p> | <p>2. <i>Source of report</i></p> <p>Universities</p> <p style="padding-left: 20px;">Series I — 1, 3-5, 7, 9-11, 15, 17-18, 21-23, 26, 30, 33-34, 36-38, 42, 44-45, 47, 50, 52</p> <p style="padding-left: 20px;">Series II — 2-4, 11-12, 14, 17, 18</p> <p style="padding-left: 20px;">Series III — 1</p> <p style="padding-left: 20px;">Series IV — 1, 7-8, 10, 12, 14-16, 18, 22, 23</p> <p style="padding-left: 20px;">Series V — 1, 3, 5</p> <p style="padding-left: 20px;">Series VI — 6, 9</p> <p style="padding-left: 20px;">Series VII — 1, 2, 5, 8, 9</p> <p>Foundations and Organizations</p> <p style="padding-left: 20px;">Series I — 2, 11, 43</p> <p style="padding-left: 20px;">Series II — 14</p> <p style="padding-left: 20px;">Series III — 7, 11, 12</p> <p style="padding-left: 20px;">Series IV — 13, 17</p> <p style="padding-left: 20px;">Series V — 2</p> <p style="padding-left: 20px;">Series VI — 5</p> |
|--|---|

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NAEB

Research

Fact

Sheets

Series I: The Effectiveness of Television as a Teaching Tool

53. The Chicago City Junior College Experiment in Offering College Courses for Credit via Open-Circuit Television

*By Clifford G. Erickson and Hymen M. Chausow,
Chicago Public Schools, Chicago, Illinois, March 1958,
53 pp., 15 tables.*

The Chicago City Junior College experiment in offering regular college courses for credit via open-circuit television is a joint effort of the Chicago Board of Education, Chicago's educational Channel 11 (WTTW) and the Fund for the Advancement of Education. TV College, as it is called on the air, is not a separate college or branch, but an integral part of the Chicago City Junior College. Teaching staff is drawn from the permanent faculty; the television teacher retains his status as a member of the faculty of his home branch, but also holds a special assignment as television teacher for all the branches.

The first-year curricula includ-

ed English, social science, biology, physical science and humanities. In the fall of 1957, the program was expanded to include psychology, accounting, Gregg shorthand, and mathematics.

Groups and methods being compared were:

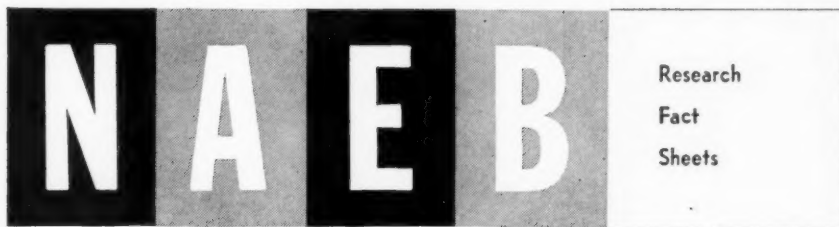
1. Experimental—television students receiving 30-minute telecast lessons at home.
2. TV Control—classroom students receiving 30-minute telecast lessons and 20 minutes of conventional follow-up instruction.
3. Conventional Control—classroom students receiving 50-minute lessons taught by

regular classroom teachers.

A summary of the results, although "the approach is explicitly one of suspended judgment," is as follows:

1. The offering of college courses for credit on open-circuit television finds a receptive audience of credit students who are older and more highly motivated than normal-age classroom students.
2. It is possible to prepare and present regular college courses on open-circuit without significant adjustment of primary objectives and learning materials.
3. The adaption of the teaching situation to the opportunities and limitations of the medium requires preparation and creativity well beyond that afforded by normal allotments of time for classroom teaching.
4. Excellent classroom teachers who wish to participate can, almost without exception, learn to be effective television teachers. Prime requisites are scholarship and the ability to work cooperatively with others.
5. The presentation of telecourses which are directed primarily to credit students acquires a not-for-credit following several times larger than the credit audience.
6. The television teacher can present controversial and sensitive material to the open-circuit audience even in a metropolitan center if his approach is objective, scholarly and devoid of sensationalism.
7. Both credit and not-for-credit students expressed essentially positive attitudes to the open-circuit television offering of standard college courses.
8. In all subjects taught, the television experimental group showed higher though not significantly higher achievement than the two control groups.
9. In mathematics and English, where the groups were equated by the co-variance method, using mental ability and subject pre-test as correction factors, there was no significant difference between the achievement of the experimental and the conventional groups.
10. In social science, when the matched pairs method was applied using the Critical Thinking Pre-test as a base for equating pairs, there was no significant difference between the achievement of the experimental and the conventional control groups.
11. The apparent superiority of the achievement of the experimental television group can be presumed to be related to the factors of age, maturity, and motivation.

JEANNIE DIETEMANN



Series I: The Effectiveness of Television as a Teaching Tool

54. An Adventure in Educational Television: a Report on "Asia in Ferment"

By Victor E. Pitkin, Connecticut State Department of Education, Division of Instruction, Hartford, Connecticut, 1957 (Mimeographed).

The telecourse, "Asia in Ferment," was offered to the public schools of Connecticut in the fall of 1956-57. It consisted of 36 programs, televised twice a week from 9:30 to 10:00 a.m. Some 20 schools took part. Statistical data were collected from 16 schools, while one additional school was used as a control group.

The remainder of the information about production and transmission problems is well documented in the report. The most exciting portion of the study lies in the impact it had on individual members of the classes. Chapter Five gives well-documented responses of seven pupils to the

course. Their opinions were asked in September before viewing the series and also in January after having seen the series. Interested readers are referred to the original study for this tabulation. The table on the next page gives a few examples.

In addition to impact on pupils, the other major findings were:

1. The telecourse brought authorities on Asia into more than 20 classrooms involving more than 450 pupils, providing them with a well-rounded picture of Asian civilizations. Probably this could be accomplished in no other way than by television.

TABLE

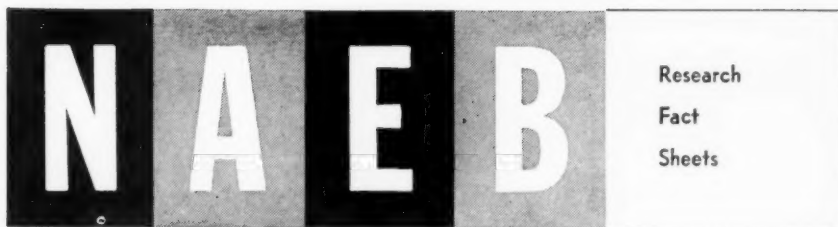
| <i>Pupil</i> | <i>September</i> | <i>January</i> |
|--------------|---|---|
| A | India is a jungle-like area where great elephants are found, a jungle land with wild animals. In the Orient, the arts are quite different from ours. Oriental dancers strike me as quite good dancers. | India is a large country with rich resources, a large land of many ports and many people. In the Orient, the arts are beautiful, different and old. Oriental dancers strike me as being very artistic. |
| B | The first thing I think about India is Buddhism, poorness. In the Orient, the arts are music. Oriental dancers strike me as good dancers. | The first thing I think about India is its people, their poorness. In the Orient, the arts are mysterious. Oriental dancers strike me as good dancers. |
| C | The first thing I think about India is dark-skinned people. | The first thing I think about India is a lot of people. |
| D | The first thing I think about India is I feel sorry for the people. | The first thing I think about India is dirt. |

2. The pupils, whether bright or below average, made significant gains in information.
3. The pupils enrolled in classes that gave the telecourse considerable emphasis made significantly better gains than pupils enrolled in classes with less emphasis.
4. An analysis of individual case studies shows that the telecourse had widely differing effects on pupils: for some pupils their attitudes toward the Orient were of increased

sympathy; some pupils were more receptive toward the Orient in September than in January; while the majority of pupils enjoyed the telecourse, there was also a small percentage who rejected the experience.

5. ETV does not in itself provide a motivation to some of those pupils who do not like school.
6. The telecourse seemed geared

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Series I: The Effectiveness of Television as a Teaching Tool

55. Teaching by Television in the Army—an Overview

By Joseph H. Kanner, Audio-Visual Communication Review, Summer, 1958, Vol. 6, No. 3, pp. 172-188.

Since 1950, the U. S. Army has been developing the use of television to meet military training and informational requirements. This program represents one of the most extensive military or civilian efforts to develop television. The major aspect of the program has produced the following results on using television for teaching purposes:

1. indicated that television is as effective as conventional instruction for teaching a variety of subject matters.
2. demonstrated that motor skills (machine gun assembly, radio alignment, etc.) can be taught by television.
3. proved that television can be

used for teaching for as long as eight hours a day for five days.

4. demonstrated that television recordings can effectively replace or supplement classroom instruction and are also effective for review on refresher training; and demonstrated that kinescopes can be used exclusively for teaching for six hours a day over a three-day period.
5. developed techniques for training new television instructors in a fraction of the time required for classroom instructors.
6. demonstrated many economies in training aid require-

ments when teaching by television.

7. demonstrated that television is an effective vehicle for achieving reductions in training time requirements.

ARMY INSTALLATIONS ACTIVELY EMPLOYING TELEVISION

The Signal Schools, Fort Gordon and Fort Monmouth

In 1950 and 1951, television equipment for training purposes was installed at these schools. It has been used in the following ways:

1. mass training,
2. classroom adjunct training — utilizing both television and conventional teaching techniques in the same class period,
3. helping to make clear difficult training problems such as small features of equipment, field demonstrations or exercises, etc.,
4. eliminating expensive models of small parts by utilizing close-up techniques.

The Transportation School, Fort Eustis, Virginia

The use of television for training at the Transportation School began in 1954. The major use is to transmit lectures and demonstrations on Transportation Corps subject matter, i.e., automotive and engine maintenance, helicopter maintenance, and similar subjects. Future plans call for the use of

television and microwave equipment to transmit ship and dock loading demonstrations to classrooms. The facility is also used as a basis for television recording of training and informational films.

U. S. Army Air Defense School, Fort Bliss, Texas

Here, television has found an important role in training electronic and guided missile personnel. Since this training often involves complex equipment, small, often inaccessible parts, etc., the television camera increases the viewing audience and enlarges the minute parts, making training more meaningful. Another use of television at Fort Bliss has been its adaption to electronic and guided-missile trouble-shooting training.

Future studies by the Army will evaluate the potential of color television for other than medical training, the use of television to teach more extensive segments of instruction, the use of television for special high-speed courses for high-aptitude trainees, special television courses for low aptitude or marginal personnel, and the more extensive use of television for teaching motor skills.

Television is not conceived of as a replacement for other methods of military training. Rather, it represents an additional new means of great flexibility to assist in the over-all training program of the Army.

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Series I: The Effectiveness of Television as a Teaching Tool

56. A Survey of Educational Television

By Maurice U. Ames, Assistant Superintendent of Schools, Board of Education, the City of New York, June 2, 1958 (Mimeographed).

The author observed educational television projects currently operating in many cities throughout the country to find out if there were possible implications for an extension of television education by the New York City Board of Education. With the cooperation of the Fund for the Advancement of Education, he visited the following ten cities:

Hagerstown, Maryland
Norfolk, Virginia
Atlanta, Georgia
Miami, Florida
Philadelphia, Pennsylvania
Detroit, Michigan
Pittsburgh, Pennsylvania
Chicago, Illinois
Evanston, Illinois
Milwaukee, Wisconsin.

Included in this report are specific descriptions of the educational programs in each of these cities. The author also gives the following list of 1) positive features and advantages of teaching by means of television, and 2) some difficulties encountered in teaching by television. These provide some interesting, if not particularly unique, observations made by one individual on the ETV programs in the schools visited.

Positive Features and Advantages of Teaching by Means of Television.

1. Lessons are more carefully planned and prepared, and are more interestingly presented than are usual classroom lessons.
2. Television can provide to all

- students access to the best teachers available in a school system.
3. Television can use a wide and rich variety of visual aids and other resources and resource people that are beyond the reach of a single classroom.
 4. Films and film clips can often be presented more effectively via the television receiver because many more classrooms can be served simultaneously with a saving of films, projectors, shades, and special rooms.
 5. The ability of the camera to focus attention, the impact of close-ups, and a certain dramatic effectiveness often help the presentation of many types of material.
 6. Students seem to assume more responsibility for learning than in the regular classroom.
 7. Because the television teacher usually has a special prestige value for younger pupils, it helps to stimulate and motivate instruction.
 8. "Slow learners" may acquire through television some of the facts and skills which they cannot learn through reading and which they are not interested in acquiring through other avenues.
 9. Test results seem to indicate that students taught by television can achieve as well in the factual information and skills usually tested as do students in regular classes.
 10. Courses of study can be developed and implemented with greater uniformity and comprehensiveness because of the common experience of a television series of lessons.
 11. It is very helpful as a teacher training device.
 12. Teacher time can be saved because a large television receiving group of pupils needs supervision by only one or two teachers.
- Difficulties or Inadequacies Encountered in Teaching by Television:*
1. There seems to be less stress on individualization of instruction and a diminution of individual guidance.
 2. There seems to be less stress on socialization of instruction. Rather than the "we" and a cooperative approach, the lessons and activities are centered around the studio teacher. Group discussion is lessened.
 3. There is obviously reduced communication between the teacher and his pupils. The teacher does not get the immediate reactions of his pupils and pupils cannot ask questions or make comments while the television lesson is in progress.
 4. Preparatory or follow-up teaching by classroom teachers with groups of 80 to 300 pupils appears to be ineffectual.

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Series VII: Administrative and Faculty Reactions to Educational TV and Radio

II. Hope and Fulfillment in ETV Research

By Charles F. Hoban, Audio-Visual Communication Review, Summer, 1958, Vol. 6, No. 3, pp. 165-171.

(Direct quotations are used liberally in the review of this article since Mr. Hoban's evocative words, in themselves, convey the connotations better than any paraphrasing possibly could.)

Although the facts uncovered by research are to be respected, research is not a "sacred cow." It is a costly, time-consuming and high-risk enterprise. Nevertheless, it is necessary, and should not be threatened for not doing what it cannot and should not do "even though it is less than perfect in its own legitimate bailiwick."

The "More for Less" Confusion

Apparently confusion has been introduced into ETV research by considering together two problems that, at this time, Mr. Hoban feels should be investigated separately. They are as follows:

1. There is the expectation that

research will deliver "sure-fire" demonstration that the quality of instruction is increased by the interposition of a TV communication system. "This expectation is quite unreasonable. However, if we permit ourselves to be hypnotized by the assertion that TV is the most powerful means of communication man has yet devised, we can easily get into the position of expecting the otherwise unreasonable . . . The quality of instruction over TV is not so much a function of TV as of the teaching performance transmitted by the TV communication system and what

- is done by students with this teaching."
2. There is the expectation that ETV research will also deliver a demonstration of savings in unit-cost of production. One source (i.e., teacher) can talk over TV to a large number of receivers (i.e., students). If the number of sources is reduced and the number of receivers increased, then a reduction in unit-cost of instruction may be expected. "But there is a joker in the deck of ETV cost accounting. Unit cost of instruction is reducible by a TV communication system provided the combined capital and operating costs of the distribution system do not increase so as to wash out the source-receiver savings."

The above factors are important but not necessarily related. "It is unreasonable to expect that both can be obtained simultaneously overnight . . . Neither are . . . likely to be *simple functions* of a *mechanism* of communication." When these problems are muddled, the expected results of ETV research are likely to exceed results delivered. "Then ETV research rather than ETV stands suspect."

The Significance of "No Significant Difference"

First, the term "no significant difference" has a statistical meaning and is related to an arbitrarily established criterion . . . Secondly,

experimental research generally involves comparison, either of one result with another or of a result with some set of criteria or predictions. Furthermore, we always seem to be faced with a demand to compare a "new" methodology with an "old." "By application of the law of inertia to educational methodology, the 'old' needs no justification, the 'new' does." Thus, when ETV research results indicate no significant difference between results of the new and the old, frustration sets in. Actually, the "basic question is not whether x is equal to, less, or greater than y . Rather, the question is for what are x and y best suited respectively, and how can they be combined to produce optimum results."

Research and the Reduction of Uncertainty

Research does not establish the value of a result; decision-makers are properly occupied with values. Yet frequently, they expect that research will establish values as well as magnitudes and probabilities of results. When research fails to do this, it is criticized for what, in reality, it cannot and should not do.

Further, TV is new; therefore, it *ought* to be better. Yet research has failed to support this prematurely optimistic view. "ETV is expected to break records in the sprint before it has learned to walk."

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In conclusion, the author points out that underlying this discussion is his concern lest the following events may occur, should the above beliefs continue to be held:

1. ETV may be "sold down the river by overselling a technology."⁵
2. ETV research may go the same way for its contradiction

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of over-optimistic expectations.

3. Imperative educational changes and development may be obscured or diverted by the enticing hope of a single technological solution to complex educational problems.

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Series III: Bibliography

13. Educational Television Program Survey No. 581

*Prepared by the staff of the Educational Television
and Radio Center, Ann Arbor, Michigan, July 31,
1958, 13 pages.*

Annually since 1954 the ETRC has surveyed the programming offered by its affiliated educational television stations. The purpose of this survey has been to measure the growth and identify changes in this programming.

This year twenty-seven stations, counting the three-station network in Alabama as one station, were broadcasting during the test week of April 13-19, and supplied annotated program logs from which the raw data for this report were extracted.

Review of Results

There was a large increase in the number of programming hours due to more stations being on the

air (27 as compared with 21 a year ago) and the majority of stations being on the air for longer periods of time than a year ago. The average of weekly program hours per station in 1958 was 38 as compared to 31 weekly program hours per station a year ago.

The increased use of kinescope recordings, causing a decrease in live and film programming, may have been due to many of the stations presenting kinescoped versions of past series or of the special series produced by the Center and NBC. In addition, several stations were using kinescopes for extensive in-school offerings.

The number of hours of Center (N.E.T.) programs used rose

nearly 39 per cent as compared to last year. However, the proportion of Center programs to the total used by stations was 28 per cent this year as compared to about 32 per cent a year ago. This incongruity seems to be due largely to the great increase in in-school programming, almost all of which is locally produced.

The most outstanding change in ETV programming this year was the large increase in in-school programming, with the greatest increase in the programs designed to teach course material to classroom students. The number of programs designed to enrich course content declined slightly, while teaching programs at the elementary and secondary school levels increased greatly.

The number of hours of ETV

programs devoted to credit courses nearly doubled last year because of the growth in the number of stations offering such courses, and the introduction of an extensive program by WTVS Detroit. In cooperation with the University of Detroit, WTVS is presenting a complete freshman program, in which students earn credit by following the programs at home, and appear on campus for consultations and examinations.

Other program categories making major gains this year were science, industry, mathematics, national and world affairs, foreign languages, and psychology. Two smaller categories making gains without the benefit of a Center program offering were homemaking and news and current events.

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N A E B

Research

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Series IV: Audience Studies

24. Program Statistical Analysis Report

*By the Audience Research Division of the Canadian Broadcasting Corporation, Ottawa, Canada, July, 1958,
42 pages including tables of results.*

Based upon the 30 pages of charts, graphs and tables, using February 16-22 as a sample week, the results of this report are as follows:

1. Radio highlights.

There was further over-all decline in sponsored network radio programming from the winter of 1956-57, although the proportions of CBC radio network broadcasting hours carried by the three major networks were the same as in the previous summer. There was more live programming on all three networks than in the previous summer, with the most pronounced increase in the French network.

On all three networks (Trans-Canada, French, and Dominion), "general" entertainment was the largest "area of interest" category; it was also the largest category every day of the week, with Sunday providing less than weekdays or Saturday. Sunday was devoted to about twice as much "creative arts" programming as the other days of the week, and also twice as much in the evening (after 6:00 p.m.) as during the day. The French network provided the largest proportion of "creative arts" programming and showed an increase over the previous winter. There were more hours of

broadcasting devoted to sports on Saturday than on other days of the week, while informational broadcasting and "school and other youth education programming" remained about the same percentage-wise as compared to the previous winter.

Drama and music programming remained unchanged in amount, as did quizzes, games, and contests.

There was a higher proportion of programming for "anybody who will listen" than in the previous winter, rather less programming for adult audiences, and a normal seasonal increase in programming for children.

2. Television Highlights.

Although the French-connected television provided more hours of broadcasting than the English network, the proportion of sponsored programming on the English network continued to rise, while sponsored programming on the French network fell slightly. The French network continued to provide proportionately more live pro-

gramming than the English network. There was about half as much film programming as in previous seasons on CBHT, and use of kinerecordings was reduced.

Comparing the winters of 1956-57 and 1957-58, there was more predominantly "entertainment" programming on the French network and less on the English network. There was a decrease in "creative arts" programming on the two connecting networks combined, while sports programming remained unchanged. The English-language stations showed a rather higher proportion of informational programming than in the previous winter. There was proportionately more "drama" on the English-language stations than on the networks, with the majority of programs aimed at "anybody who would listen," although this category showed a slight decrease as compared to the previous winter.

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to about the right degree of difficulty for most pupils; most thought that a series of 36 programs was not too long.

7. Both pupils and teachers were very appreciative of the guest authorities, who had lived in the Orient and knew their subject. This was cited repeatedly as an outstanding

feature of the series.

8. Perhaps one of the most outstanding contributions of this telecourse was the effect it had on teachers. Several teachers are now planning to revise their social studies program to include work on Asia.

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Series VII: Administrative and Faculty Reactions to Educational Television and Radio Center

10. Evaluating Instructional Films by Television

By Mendel Sherman, from the Audio-Visual Communication Review, Spring, 1958, Vol. 6, No. 2.

This is a report of a study made to determine the feasibility of using television transmission as a means of evaluating instructional motion pictures. In order to accomplish this purpose, evaluations made by teachers who viewed the films via television were compared with evaluations made by regularly constituted committees which presently evaluate films.

Five televised films were evaluated individually via TV by

145 intermediate grade teachers in the Los Angeles County and the Cincinnati public school systems. Audio-visual committees in both school systems evaluated the films after viewing them by direct motion picture projection.

The conclusions reached in this study are:

1. Teachers will give much the same evaluation to some televised black-and-white instructional films that will be given

- by audio-visual committees who meet as a group to evaluate.
2. There will be differences at times in the rating given on several of the criteria used to judge the films, but these will not necessarily affect the over-all rating of the film nor the final recommendation for distribution.
 3. There is little likelihood that teachers who view by television will recommend a film for distribution that would have been rejected by the audio-visual committee.
 4. The number of differences in rating the color films leads to the conclusion that it is questionable whether these films should be evaluated by television unless they can be received in color.
 5. It cannot be concluded from this study that audio-visual committees are unnecessary and that their complete functions should be transferred to television teachers. The expense of television facilities prohibits its use in film evaluation for small or specialized groups.
 6. There are many teachers who would be available, on a voluntary basis, to participate in the evaluation of instructional motion pictures by television.

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TV Provides Two Complementary Services

Educational Television, as 1958 came to a close, had a total of 32 stations, with 10 more expected to be activated before spring, 1959. The location of these stations provides an important educational service to a substantial portion of the United States. This record is remarkable when one considers the problems ETV has faced, especially the financial ones.

Far more important than the number of stations, however, is the quality of the programs being presented, and the growing audience, small though it may seem by commercial standards, the programs are drawing from discriminating listeners. A recent interview survey made in Madison, Wisconsin, for example, revealed that 16.6 per cent of those interviewed had viewed ETV Station WHA-TV in the last two weeks, 29.4 per cent in the last month, and 22.6 per cent longer ago than three months. Only one-third of those interviewed had never viewed WHA-TV's programs.

Fortunately, the one thing missing in the television picture is the cleavage which for so many years divided radio broadcasters—commercial and educational. Instead, there has developed, for the most part, the highest type of cooperation between the educational telecasters and their commercial brethren. The commercial networks have contributed excellent programs to ETV stations. NBC,

for example, cooperated to make possible the presentation of the first national live programming on the ETV network. Individual commercial stations, in numerous instances, have contributed equipment, made cash contributions, and shared facilities with educational stations.

Educational television, in its turn, serves as a training ground for the skilled personnel television requires, develops new and experimental program types which commercial stations seldom find it possible to explore, constitutes a yardstick and thus inspires commercial television to improve its programming in the public service field, and assumes an educational task which commercial television finds itself financially unable or unwilling to undertake.

The American public benefits substantially from the existence of these two distinctly different types of stations. The benefit should increase as additional ETV stations are established and more and more of the viewers have available the educational, cultural, and public service programming which ETV stations have demonstrated that they are uniquely capable of supplying. May the time never come when the American public is denied the choice of programs from both educational and commercial stations.

—TRACY F. TYLER, *Editor*

Oldest Station

Continued from page 5

ored position went on.

If one individual were to be singled out as most responsible for the establishment and growth of 9XM-WHA, it undoubtedly would be the late Professor Earle M. Terry of the physics department. It was he who provided the inspiration for the work and attracted to it zealous student workers who carried the work forward. It was he, the scientist, who had the social vision to sense the potentiality of radio as an educational tool.

Professor Terry persisted in developing the wireless telephone despite the apathy of some colleagues who felt that it would never amount to anything more than "a plaything for kids." When faced with opposition, he declared in a faculty meeting, "Gentlemen, the time will come when wireless receivers will be as common as bathtubs in Wisconsin homes."

Specific dates in early radio history are not easy to determine. In the laboratory, improvements come gradually as experimentation continues. The exact date for the first "successful" broadcast probably never will be known for that reason. Success is a relative thing, with standards being raised as perfection is approached. However, the year 1917 is recognized as having produced wireless telephone

broadcasts from 9XM at the University of Wisconsin, and 1919 is acknowledged as the year when a regular schedule of broadcasting was first adhered to.

Among Professor Terry's students working with 9XM was C. M. Jansky, Jr. He is now a nationally recognized radio electronics engineer, of Jansky and Bailey, Inc., in Washington, D.C. As the principal speaker at the annual WHA Family Dinner late in November, 1958, he lauded Professor Terry's accomplishments and the subsequent development of educational broadcasting in Wisconsin.

Mr. Jansky reviewed the growth of WHA and recalled how it led to an extension of the service on a statewide basis. He said, "The establishment of this (8-station) FM network took real pioneering courage. As time goes on, the audience to Wisconsin's state-owned FM stations will increase steadily and their service will become more and more important."

Then, reflecting the influence of his professor he added, "Wisconsin has a right to be proud of its pioneer work in all phases of broadcasting, including its pioneering in program building as well as the scientific development of the art."

In dedicating the historical mark-

er, President Conrad A. Elvehjem, of the University of Wisconsin, attributed the success of the station to the fact that "the basic philosophy undergirding its development has been sound and will provide the right direction for future utilization of radio and television in education generally."

He continued, "WHA has held firm to its basic purpose: education. It has not gilded the lily. It has sought to present education in attractive form, and has succeeded. Education can be entertaining, but entertainment is seldom educational. WHA has managed to locate the fine line of distinction in this respect and has operated well with-

in the educational side of this line. There is a real temptation, I know, in this age of mass communication, listener counts, and hidden persuaders, to seek the broadest possible audience with sugar-coated messages. WHA has held aloof from these temptations, insisting always on quality offerings, knowing that while there is sugar enough on the airwaves to satisfy anyone's sweet-tooth, the meat of education is hard to come by on most channels.

"I think we can take from WHA's long experience some basic principles to guide us in the future use of radio and television in education."

Public Relations

Continued from page 7

me to California in connection with the planning of our new broadcasting building. Primarily we were to visit the operations of NBC, Burbank, and CBS, Hollywood, to see at first hand technical details we might have overlooked in our plans and to ascertain what errors had been committed in the erection of these buildings. Subsequently, we decided also to visit WBBM-TV, Chicago, and three educational television stations. Virtually identical letters announcing our intentions were sent to the three commercial and the three educational operations. Very promptly came the replies from NBC, CBS, and

WBBM-TV, all most cordial, and all containing detailed instructions as to whom to see and how to get in touch with him.

The two California groups added their willingness to make hotel reservations, announced their desire to pick us up in their automobiles to escort us to their operations, and invited us to luncheon dates. They also suggested other (non NBC or CBS) broadcasting things to see in Hollywood and offered to secure clearances. Later, the CBS representative called us from California (prepaid) to add extra cordiality and to offer any other services we might need.

What about the three ETV's? Simple. No replies.

On arrival at the three commercial operations, we found that our reception out-did even the promises forecast by the letters. Many high-salaried key persons were already buttressed by stacks of blueprints, charts, and other technical materials in which we might be interested.

While in California, we made an unannounced Saturday afternoon visit to a new, highly recommended TV station in San Diego. Saturday afternoon! But the skeleton staff on duty knocked themselves out to show us what we wanted. A secretary stayed past her normal leaving time two hours in order to be of service to us.

Back again to the ETV's. We skipped one of them because our schedules and commitments made it necessary, unfortunately. But our experiences in the other two could be characterized by one word—sordid.

We made our appearances at these operations exactly as indicated in our letters, but the respective managers to whom we had written were not in. That in itself could be condemned, because other things of more importance could have come up. But (a) the secretaries had not been alerted as to our coming and our names meant nothing to them, (b) they could volunteer no information as to when their respective managers

would be in, (c) we were not asked to sit down, and (d) after about thirty minutes of indecision at both points, and at *our* suggestion, affable but uninformed staff assistants were found who "showed us around."

I suspect that the staffs of these two ETV stations had received little indoctrination in the true meaning of public relations. Come heck or high water, we will both have a sour impression of these two stations for a long time and probably not deservedly so.

IV

Indeed, public relations must first be a state of mind that must be made to permeate every staff member. The proper state of mind will find fruition in the proper types of public relations methods and media.

It is trite but true to say that we are living in a complex and highly interlocking society today, and no person or organization can be free of the implications of this fact. But more so than many other groups are broadcasting stations, and I would argue that educational stations require good will even more than our commercial brothers.

So public relations for our operations are more far-reaching than advertising programs or campaigning for money. Basic support must come from having many, many friends.

There is no substitute for *good will*.

Role of Music

Continued from page 9

FM, which is now part of virtually every radio set in Germany. Users pay six dollars a year per set, a tax which finances the operation of the station. A particularly recent and successful venture on TV in Frankfurt has been a presentation of five Mozart operas, expressly produced by Hessischer Rundfunk for its viewers.

In evaluating the magnitude of Frankfurt's offerings, it should be kept in mind that this is only one of several West German stations, which operate independently from one another, though responsible to the government. Their excellence of programming is noteworthy in each case.

In Switzerland, the Société Suisse de Radiodiffusion spent more than \$570,000.00 in 1957 on the radio orchestras which it maintains in Geneva, Zurich, Lugano, and Lausanne, representing the three linguistic components of the country. Among these, the Orchestre de la Suisse Romande under Ernest Ansermet is world-famous. Weekly programs of all these orchestras, both in public and on radio only, are extremely popular. Radio Geneva itself is particularly known for a preponderance of ser-

ious music. It has now added a new organization, entitled *Grouperment de Musique Ancienne*, for the express purpose of issuing discs of ancient music. There is a great variety of regular chamber music programs on Radio Geneva. The budget of the station is met by its own treasury, to which listeners must contribute \$6.50 per year, and by the city and state of Geneva. Great efforts are now being made in the field of stereophonic sound. Switzerland also reports a steadily increasing number of short-wave stations with outstanding musical programs.

Swiss television is governed by ethical codes set forth by the Federal Government. I should like to quote here a brief version of these codes: "Stations must serve the interests of the country, strengthen national unity and homogeneity, safeguard and stimulate spiritual and cultural values of the country, contribute to spiritual, artistic, moral and civic education of the viewers, and be a source of information and relaxation. The vogue of certain programs does not suffice to judge their quality. Above all, they must avoid any injurious effect upon youth."

As a result of these demands

on the part of the government, 34% of all programs on Swiss TV are devoted to a definite cultural level, i.e. programs of theater, opera, ballet, concerts, festivals, programs of religious character, visits to museums or exhibits, documentaries, etc. Twenty-two percent are variety programs, but even these are mostly of artistic and instructive character. The remaining TV programs are divided among youth and children shows, current events, and sports. An increasingly popular development, in which Swiss TV takes a great part, is an exchange of programs among twelve European countries (to date), entitled "Eurovision."

Significantly, the Swiss government voted last year to finance TV through a government loan, rather than accepting commercial aid. For the next ten years the Association for the development of Swiss TV will raise two million francs annually to aid the budget. This method of financing assures continued high standards of programming.

French radio operates four separate chains. They are the national chain, the Parisian chain, Paris-Inter, and P.M. In addition there are two more faculties, Radio Sorbonne and Club d'essai. Of these the national chain is devoted almost entirely to serious music. Here is a typical day's programming of "France III," the national chain:

- 7:20 Symphonic Prelude
- 8:00 Hour of French Culture
- 9:40 Vocal Art

- 11:00 Youth and Music
- 12:05 Spiritual Concert
- 1:05 Review of the Arts
- 2:00 Chamber Music
- 2:30 Classics of Yesterday and Today
- 4:40 Chamber Music
- 5:15 Organ Recital
- 6:00 History of Music
- 8:00 Orchestra National in a full-length radio broadcast
- 9:40 Musical News
- 11:00 Bartok Cycle on records.

Regular programs on a sustaining basis are the Hour of French Culture, every week-day morning at 8, in which aspects of music are included; History of Music, each Thursday at 6 P.M.; Tribune of Record Critics, each Wednesday at 11:10 A.M.; Great Musicians, daily at 10:20 A.M. These are but examples of the programs on all chains. I attended a particularly interesting broadcast, which has been heard uninterruptedly every Sunday morning at 11 since the close of the war. Its title is "Les Plaisirs de la Musique." Script and direction are by Roland-Manuel, one of France's outstanding musicians. The program consists of an informal and delightful dialogue between M. Roland-Manuel and a student of music, discussing one particular masterwork, with illustrations by the artist of the day (a different instrumental or vocal work and its interpreter are chosen each week). The program then concludes with a performance of the work in question in its entirety. This broadcast enjoys tremendous popularity.

The French National Radio employs four permanent orchestras, each with different personnel: Orchestre National, one of France's greatest; orchestre radio-symphonique; orchestre radio-lyrique, and a chamber orchestra. In addition, most of the radio stations of the greater cities of the provinces employ their own permanent orchestras, thus supporting professional musicians in areas of more limited musical life. The French National Radio also maintains a great choral organization of 120 members. An important program policy is to perform new works of French composers, and to give young talent, both creative and re-creative, a chance to be heard.

French television avails itself of regular weekly concerts of great music. As in other countries of Europe, Eurovision has become quite popular in France. Recent musical programs have included Italian song festivals and opera performances from Munich; and viewers enjoyed greatly all the proceedings at the Salzburg Festival of 1958, shown for the first time in member countries of Eurovision.

The tax or dues for the right to use either a radio or a television set in France amounts to approximately \$5.00 for the former, \$15.00 for the latter, forming a fund of considerable size toward the financing of French broadcasting. Studios in Paris are still scattered all over the city (the studio in which I played my recital is quite a dis-

tance away from the administrative offices where I conducted my research) but an imposing new building which will eventually house most French broadcasting activities is in the process of being erected.

I mention Holland last because this was the last stop on my itinerary. As far as the importance of its musical programs and the impression they made upon me are concerned, this country should be high on the list indeed.

All of Holland's broadcasting activities are concentrated in the wondrous town of Hilversum, the internationally famous radio city, a showplace of modern architecture, and at the same time a city of best Dutch tradition. After I played my recital for Radio Nederland, the Dutch overseas network which broadcasts twenty-three hours daily to all parts of the world and in all languages, I had a good, long talk with members of the official Dutch radio family. This conversation revealed some amazing facts. Dutch radio maintains a total of seven orchestras. One is the Radio Philharmonic Orchestra, a major force among European orchestras today, totaling 100 men, and presently directed by a very gifted 28-year-old conductor. This great ensemble broadcasts three times a week. Then there are a Radio Orchestra, which brings mainly operatic and operetta music; the Promenade Orchestra for lighter music; a separate chamber orchestra of forty

members; and three dance orchestras. In addition, the Hilversum chain employs a great choir. Besides the regularly scheduled broadcasts of all these groups, which exist solely for the radio, bi-weekly transmissions of concerts by the famous Concertgebouw Orchestra of Amsterdam are heard. Seventy percent of all music presented on Dutch radio is live, with records being used only in the morning and late evening. Sixty percent of all music heard is of serious character.

Radio Nederland also operates a transcription service, putting at the disposal of the world various series of programs of Dutch music. Another fine service of Dutch radio is the sponsorship of an annual course for conductors, a product of which is the present director of the Radio Philharmonic. When one considers that Dutch radio employs a total of 1200 musicians—an unusually high ratio of the total population of this country—the musical picture becomes indeed impressive. Commercial advertising is not accepted. Financial support is derived solely from the twelve guilders (\$3.00) which every listener must pay per set, per year. Music in Dutch television is at this point, at least, negligible. Hilversum has for years meant the highest standards of broadcasting for any radio connoisseur, and this tradition remains unbroken today.

I have not included in this report the outstanding work of the British Broadcasting Corporation,

with its great heritage of music broadcasting. I felt that most music lovers here are familiar with many of the BBC's offerings, though it still seems incredible to me that the famous "Third Program" can come on the air at six in the morning with a ninety-minute version of Wagner's *Siegfried*!

I have chosen these four centers of European broadcasting for the basis of this report, because I feel that despite their geographic and linguistic diversity, they represent a fairly unified picture of music broadcasting at its finest. Conclusions appear to be obvious. Except for those of us who are fortunate enough to live within hearing distance of the outstanding programming offered by the Canadian Broadcasting Corporation and its affiliate stations, which compares most favorably with that of the countries described above, higher musical needs and appetites of Americans remain relatively unsatisfied as far as music on the air is concerned.

In our economic system of the proverbial free enterprise, only two ways of raising the over-all level of music broadcasting appear to be possible:

1. Government or public aid might be made available to bolster and to build up existing educational broadcasting facilities, so that local educational stations and channels could be brought within reach of a much wider public without the preposterously high separate "fine" for having them. Once on a sound

financial footing, educational broadcasting could then proceed to plan centralized and individual programming on a long-range basis.

2. National organizations known for their beneficent endeavors, such as large foundations, could buy quantities of choice time on radio (both network and local), in order to produce programs of the highest calibre. Such programs could be planned far ahead by special committees of experts. In this manner networks and individual stations would be recompensed

for the loss of "steady" clients, and the discerning listening public would at last be satisfied in its quest for replacement of the dismal fare available through multiple sponsorship of musically inferior programs with broadcasts worthy of Americans' keen interest in abiding values.

It seems to me that one of these paths, or some similar one, must be taken, if our music broadcasting is to take on a complexion of permanent worth.

Projects and Products

Continued from page 13

waiting room. With this arrangement the patient is able to see and to converse with persons not ordinarily permitted to visit the room. A television tuner-speaker is provided for the convenience of the patient, and is kept under the pillow after all adjustments relating to channel selection and volume control are made. Included is a specially-designed telephone with a dial located in the base of the instrument. This connects into the hospital communication service as well as to the regular telephone system.

The introduction of some modifications in installation would permit the visiting teacher to conduct selected classes via closed-circuit TV, and in this way offer more

hours of instruction per capita than is possible with present methods. The talk-back facility provides additional flexibility for this purpose. Under appropriate circumstances, broadcast instructional television can be channeled through the system to patients able to participate in more formal or specialized courses.

Experiments are being conducted to perfect slow-scan, low-definition television transmission over existing telephone lines. Possible future applications of this approach, tied in with the facility described above, could supply video and audio contact between the classroom and the homebound student at a relatively low cost for a substantially enriched program.

Director's Dilemma

Continued from page 10

ately moves to that same student.

The teacher scans the class and calls on the student *over whom the mike is positioned*.

Teacher asks question and calls on student. Director takes close-up camera. Student answers. Viewer gets close-up of student and perfect audio at the split second the action begins.

Director cuts to another camera on teacher, who asks next question. Boom moves to another student, close-up camera follows boom to same student, teacher asks student to recite, director takes close-up, and viewer gets first syllable of

answer.

This technique has many advantages for the director. There are some for the teacher, too, who no longer can rehearse a class for weeks prior to program with pat answers to pre-planned questions. Spontaneous answers are the result because the teacher does not decide who recites. The students are not let in on the method either, which makes for a natural situation.

The director, through the boom operator, has the final word in Ron Hull's system, which makes for smooth, professional productions.

Teaching or Showmanship?

Continued from page 16

not merely sent by closed circuit to two or three classrooms down the hall, it will have a potential audience of auditors which is enormous.

The University of Houston counts twenty auditors for each enrolled student in its broadcast freshman courses, and the students number in the hundreds. And among these auditors are skeptics of ETV, legislators, community leaders of all types whose support is needed. This audience is far from captive.

There have been influential people who were all for ETV until they saw some of its programs, or who even continued to support it because it was "a good thing" but never found the programs interesting enough to watch. These people must be interested—must be motivated to watch, and a good program on any level, even the pre-school level, if it is well presented, will interest any one of any age, at least for a while, whereas a dull program at any level will seem

dull to anyone.

The only answer is good teaching. There is no new problem. ETV is only a new medium. It will take any teacher a considerable length of time to get used to the new medium, but when he has mastered it, he can only use it well if he teaches well.

The General Interest Program•

Into this category fall all programs which are not formal courses: cultural presentations and performances, music and dance recitals, drama, museum programs, and current events. The general interest program is watched as a show rather than as a course. Even in the case of a purely expository program, it is still a program, not a lecture, and it is a television program, however onerous that may sound. The difference between the telecourse and the television program is, I believe, the difference between the textbook and the magazine article on the same subject. In the article you have to capture the reader and keep him by keeping his interest; in the textbook you need only present your organized body of knowledge. Other motivations push the reader through the pages. Of course, it is a better text if it holds the reader by its own good writing, frequent use of examples and illustrations, constant reference to people, and crystal-clear progression from point to point in the exposition. But how many texts are like this? How many lectures are like this? Most

are not because they do not have to be.

The general interest program has no captive audience. Several other channels guaranteed to offer effortless entertainment are immediately available at the first feeling of boredom. Thus, just like the magazine article, the program must be sprightly, must "hook" the viewer and motivate him to watch, and must continually satisfy him and reward his viewing effort.

This is not to say that education is to be "sugar-coated." A sugar coating is a veneer of some entirely different substance from the main content, which the consumer enjoys without knowing that he is swallowing the pill as well. It is possible to use the term "palatable," however, since this implies that the medicine not only should be of ultimate value to the user, but should be so well concocted that its consumption is a pleasure in itself. Only the captive audience can be expected to take medicine without enjoying it. The general interest program must be enjoyed or it will have no audience.

Thus it is, in a way, a show. It is a program. It is not "teaching" in the main, although it may be this in part. All the principles which make a good program of any type apply here as well. It must have good pacing. It must have variety, it must have strong elements of human interest, it must have a certain structure, a certain build-up, a beginning, a middle, a high point, and an end.

This doesn't make education into entertainment; it simply makes it into better education. The content is the thing. How the same content is presented in two lectures or two articles makes the difference between an ordinary and a good professor, between a professional writer and an amateur.

But all the elements of the program or the show must be part of the content. There is no value in sugar coating. Added gimmicks and situations, devices or dancing girls, can only distract from rather than add to the program's effectiveness. But intrinsic gimmicks and devices, situations which arise from the content, dancing girls where modern dance can illustrate and symbolize and where the dancers do not distract from the meaning of the dance—this way lies great communication art.

The educational broadcaster is left far behind by the commercial networks in this area. Programs on such series as *Adventure*, *Omnibus*, *Camera Three*, and the best of the NBC educational series have again and again shown how creative imagination can be brought to bear on the educational purpose, and result in television art which communicates, which is more functional if you will, than almost anything which the educational broadcasters have produced. And if it be said that money makes the difference, this cannot be denied. With money you can hire a whole line of dancing girls. But without money, much can be achieved with one dancer who contributes her time—if the philosophy of production will ac-

cept it and if the ETV director has the imagination to weave it into the program so that it is an intrinsic part of the content.

To sum up, then, educational television to succeed in its objective must be good education, but it must also be good television. The ETV station in its programming ranges far afield from straight teaching into the fields of artistic production, musical recitals, drama, etc., which cannot be produced nor judged by the same standards. It is a help to the thinking of educational broadcasters and program planners if they realize that they are doing two quite different kinds of things: lectures and programs. They must be aware that (1) direct teaching on television must first of all be good teaching before it can be good educational television, and (2) general interest and cultural programs must be good programs in the (pardon the expression) entertainment sense before they can be good educational television. In either case the lecture or the program must be built for the medium, but also in either case form must derive from content. The educational broadcaster who claims he has nothing at all to learn from the entertainment producer is either intending to limit his efforts only to direct teaching, or is closing his eyes to reality and refusing to master the medium with which he intends to communicate. In either case he will come to change his point of view as he discovers that it does not fit the activities in which he finds himself engaged.

Book Review

Continued from page 15

support VHF operations in these places irrespective of other revenue sources."

The AM (or TV) educational stations which Mr. Hill imagines in these locations would have a combined potential audience of more than 50 million people. Yet their total operating support would be derived from the combined subscriptions of about one million persons.

A few quotations from this book will reveal the refreshingly mature, original approach behind "the KPFA idea."

"Obviously, to earn systematic support from the community's intellectual leadership, the listener-sponsored station must give the values and concerns of that leadership an accurate reflection at their highest level . . . Because the resulting broadcast service is public, the community at large—no doubt by slow accretion and assimilation—is enabled to participate in the best aspects of its own culture as few communities have done before

. . . A practical instrument of adult education can be created wherein the concept of the average gives way to expression of the unique."

"KPFA does not expect any person to enjoy all of the programs it broadcasts. These programs are never designed for continuous listening throughout an evening."

"On several occasions the project had an opportunity to compare results, in identical procedures, between the use of an attractively printed flier and the use of a mimeograph sheet as expressive of haste as of economy. At no time was there found to be a discernable advantage in one of these types of material over the other, provided the verbal content was similar . . . thoroughness and literacy were of far greater importance in such materials than format, layout, etc. . . . thus the project found—perhaps merely by the nature of the response it sought—an axiom of promotion the reverse of that commonly advanced. That is, the content was everything, the 'package' secondary."

"Without arguing the merits of this widespread 'philosophy' of communications (as 'mass' media), the KPFA experiment set out to express an essentially opposite view. The audience was believed to consist of an individual, whose intention was to listen. The listening individual was assumed to have an alertness, an intelligence, an interest and an attention-span commensurate with those of the persons preparing and airing the program. . . . The station was frankly against the idea of 'background' programming, especially in music, and urged its audience to listen with complete selectivity. It was, in fact, a hopeful assumption that the radio would be turned off, or to another frequency, when KPFA's particular program had less than a compelling value for the audience of one With this freedom from the norm-seeking of conventional radio, the experiment undertook to treat its program subjects much as a serious journal might."

The informality of the "atmosphere of communication" of KPFA is outlined in an interesting section, explaining why KPFA eliminated the close timing of programs: "The station from its beginning eliminated close timing of individual programs This practice had an entirely economic origin and meaning there appeared no reason whatever for its continuance in educational radio not en-

gaged in the sale of time segments." A cushion, periodically, in the form of a "Miscellany" program nevertheless kept the schedule dependable enough for its listeners. Dead air is common, as for intermissions. Public affairs programming is perhaps the best illustration of genuine free speech available anywhere in the U. S.

Finally: A few other provocative statements should be quoted: "What is the audience? An old theatrical analogy in radio, which envisions the broadcast audience as seated, so to speak, in a vast auditorium of common tastes and interests, is the apparent source of this preoccupation. The broadcaster is forever trying to peek through the curtain to size up the house But any one of us on the receiving end of a communication of this kind, discerning this motive, knows the effect of it. If someone addresses us not directly out of his interest or vision, but out of a desire (based on his estimate of our nature) to manipulate us into his meaning, we resent it."

In sum: One of the most provocative books I've read. A limited number of copies are available to NAEB members, free of charge, as mentioned in the November *Newsletter*. The NAEB is proud to have been associated with this stimulating experiment.

—HARRY J. SKORNIJA

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